

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)	<b>Complete if Known</b>	
	Application Number	09/838,700
	Filing Date	April 19, 2001
	First Named Inventor	Srivatsa Venkatasubbarao
	Art Unit	Not Yet Assigned
	Examiner Name	Not Yet Assigned
Attorney Docket Number	M-15218-1C US	
Sheet 1 of 5		

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
HP		US- 2004/0023247A1	02-05-2004	Xu et al.	
		US- 2004/0012676A1	01-22-2004	Weiner et al.	
		US- 2004/0030504A1	02-12-2004	Helt et al.	
		US- 2004/0038268A1	02-26-2004	Pirrung et al.	
		US- 2004/0002167A1	01-01-2004	Andersson et al.	
		US- 2002/0182717A1	12-05-2002	Karlsson	
		US- 2002/0154311A1	10-24-2002	Ivarsson	
		US- D472,644S	04-01-2003	Dawson et al.	
		US- D480,149S	09-30-2003	Dawson et al.	
		US- 6,698,454B2	03-02-2004	Sjoelander et al.	
		US- 6,589,798B1	07-08-2003	Loefas	
		US- 6,503,760 B2	01-07-2003	Malmqvist et al.	
		US- 2003/0022388A1	01-30-2003	Roos et al.	
		US- 6,493,097 B1	12-10-2002	Ivarsson	
		US- 20002/0019019	02-14-2002	Hamalainen et al.	
		US- 6,289,286	09-11-2001	Andersson et al.	
		US- 5,753,518	05-19-1998	Karlsson	
		US- 5,593,130	01-14-1997	Hansson et al.	
HP		US- 5,164,589	11-17-1992	Sjoedin	

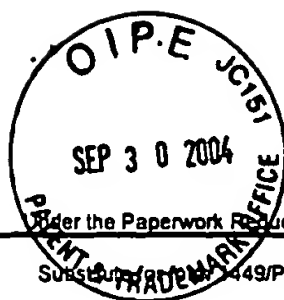
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
HP		WO 03/102580A1	12-11-2003	Saeften et al.		
HP		WO 03/056337A1	07-10-2003	Loefas		
HP		AU 742417	02-11-2000	Ivarsson		
HP		WO 98/32002	07-23-1998	Herbai et al.		
HP		WO 97/19375	05-29-1997	Ivarsson et al.		
HP		WO 96/38729	12-05-1996	Wahlstroem et al.		

Examiner Signature		Date Considered	9/17/05
-----------------------	--	--------------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	09/644,803 838700
		Filing Date	April 19, 2001
		First Named Inventor	Srivatsa Venkatasubbarao
		Art Unit	Not Yet Assigned
		Examiner Name	Not Yet Assigned
Attorney Docket Number	M-15218-1C US		
Sheet	2	of	5

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
IAP		US- 5,313,264	05-17-1994	Ivarsson et al.	
		US- 5,573,956	11-12-1996	Hanning	
		US- 2003/0067612A1	04-10-2003	Ivarsson	
		US- 6,277,330 B1	08-21-2001	Liu et al.	
		US- 4,508,832	04-00-1985	Carter et al.	
		US- 5,229,833	07-00-1993	Stewart	
		US- 5,255,075	10-00-1993	Cush	
		US- 5,437,840	08-00-1995	King et al.	
		US- 5,483,346	01-00-1996	Butzer	
		US- 5,485,277	01-00-1996	Foster	
IAP		US- 5,491,556	02-00-1996	Stewart et al.	
		US- 5,633,724	05-00-1997	King et al.	
		US- 5,856,873	01-00-1999	Naya et al.	
		US- 6,594,011	07-00-2003	Kempen	
		US-			
		US-			
		US-			
		US-			
		US-			

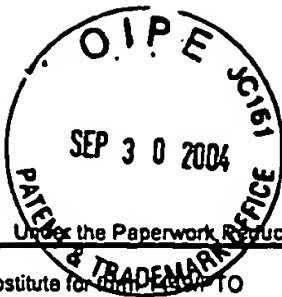
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
IAP		WO 96/08720	03-21-1996	Sternesjoe et al.		

Examiner Signature		Date Considered	2/7/05
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/088 (08-03)

Approved for use through 07/31/2006, OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/838,700
				Filing Date	April 19, 2001
				First Named Inventor	S. Venkatasubbarao
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	3	of	5	Attorney Docket Number	M-15218-1C US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
AP		TADASHI SAITOH, ET AL. "Optical Characterization of Very Thin Hydrogenated Amorphous Silicon Films Using Spectroscopic Ellipsometry"; Japanese Journal of Applied Physics; Vol. 30, No. 11B, November 1991. pp. L1914-L1916	
↑		"Handbook of Optics", Michael Bass Editor in Chief, by The Optical Society of America; Vol. 1; pp. 4.23, 4.24; 1995 McGraw-Hill, Inc.	
		GANG JIN ET AL. "Imaging Ellipsometry Revisited: Developments for Visualization of Thin Transparent Layers on Silicon Substrates", American Institute of Physics, Rev. Sci. Instrum., pp. 2930-2936, August 1996.	
		MAX BORN ET AL. "Principles of Optics – Electromagnetic Theory of Propagation, Interference and Diffraction of Light", Sixth Edition, pp. 47-51 Pergamon Press	
		EGGINS, "Biosensors: An Introduction", pp. 112-113, 1987 John Wiley & Sons	
		DANNY VAN NOORT ET AL. "Monitoring Specific Interaction of Low Molecular Weight Biomolecules on Oxidized Porous Silicon Using Ellipsometry", Biosensors & Bioelectronics Vol. 13, No.3-4 pp. 439-449, 1998 Elsevier Science, S.A. Great Britain	
		GANG JIN ET AL. "Imaging Ellipsometry for Biosensor Applications" Transducers '95. Eurosensors IX, Digest of Technical Papers Vol 2, Sessions A7-D13, Papers No 232-496 pp. 509-512, Stockholm, Sweden, June 1995	
		JINYU WANG "Waveguide Ellipsometry Biosensors: Concept and Preliminary Analysis", SPIE Vol. 1648, Fiber Optical Medical and Fluorescent Sensors and Applications pp. 44-50. 1992	
AP		ULF JONSSON ET AL. "Flow-Injection Ellipsometry – An in Situ Method for the Study of Biomolecular Adsorption and Interaction at Solid Surfaces," Colloids and Surfaces. 13 (1985) pp. 333-339, 1985 Elsevier Science Publishers BV, Amsterdam, The Netherlands	

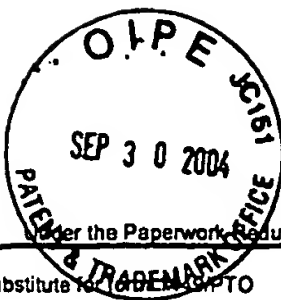
Examiner Signature		Date Considered	2/7/02
--------------------	-------------------------------------------------------------------------------------	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for USPTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	09/838,700
Filing Date	April 19, 2001
First Named Inventor	S. Venkatasubbarao
Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	M-15218-1C US

Sheet	4	of	5
-------	---	----	---

**NON PATENT LITERATURE DOCUMENTS**

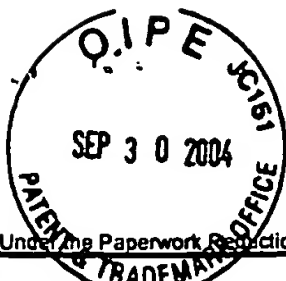
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
1/10		JONSSON, ULF ET AL. "Biosensors Based on Surface Concentration Measuring Devices-The Concept of Surface Concentration" Progress in Colloid and Polymer Sci. Vol. 70, pp. 96-100, 1985	
↑		ULF JONSSON ET AL. "Surface Immobilization Techniques in Combination with Ellipsometry" Methods in Enzymology Vol. 137, Immobilized Enzymes and Cells Part D pp. 381-1351, 1988 Academic Press, Inc. Harcourt Brace Jovanovich, Publishers	
↑		CH STRIEBEL ET AL. "Characterization of Biomembranes by Spectral Ellipsometry. Surface Plasmon Resonance and Interferometry with Regard to Biosensor Application", Biosensors & Bioelectronics 9, pp.139-146, 1994 Elsevier Science Publishers Ltd.	
		HAKEN NYGREN ET AL. "Determination by Ellipsometry of the Affinity of Monoclonal Antibodies", Journal of Immunological Methods, 92, pp.219-225, 1986 Elsevier Science Publishers Ltd.	
		JOHN F. PLACE ET AL. "Opto-electronic Immunosensors: A Review of Optical Immunoassay At Continuous Surfaces", Biosensors 1, pp.321-353, 1985 Elsevier Applied Science Publishers Ltd., England	
		A. BRECHT ET AL. "Biosensors: Fundamentals, Technologies and Applications" GBF Monographs, Vol. 17, pp.174-178, 1991 Germany	
		T.A. RUZGAS ET AL. Ellipsometric Immunosensors for the Determination of γInterferon and □ Human Serum Albumin □ Biosensors & Bioelectronics 7, pp.305-08, 1992 Elsevier Science □ Publishers Ltd.	
		CLIFFORD C. HOYT ET AL. "Structural analysis with quantitative birefringence imaging", American Laboratory, pp. 34-42, July 1999	
↓		DIRK HONIG ET AL. "Direct visualization of monolayers at the air-water interface by Brewster angle microscopy", J. Phys. Chem., pp. 4590 & 4592, 1991 American Chemical Society	
1/10		S. HENON ET AL. "Microscope at the Brewster angle: direct observation of first-order phase transitions in monolayers", Rev. Sci. Instrum. 62, (4) pp. 936-939, April 1991 American Institute of Physics	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/088 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1-475 PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)	<b>Application Number</b>		09/838,700		
	<b>Filing Date</b>		April 19, 2001		
	<b>First Named Inventor</b>		S. Venkatasubbarao		
	<b>Art Unit</b>		Not Yet Assigned		
	<b>Examiner Name</b>		Not Yet Assigned		
<b>Sheet</b>	5	<b>of</b>	5	<b>Attorney Docket Number</b>	M-15218-1C US

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
IAF		GANG JIN ET AL. "A biosensor concept based on imaging ellipsometry for visualization of biomolecular interactions", Analytical Biochemistry 232, pp.69-72, 1995	
IAF		PENTTI TENGVALL ET AL. "Complement activation by 3-mercapto-1,2-propanediol immobilized on gold surfaces", Biomaterials Vol. 17, No. 10 pp. 1001-1007, 1995 Elsevier Science Ltd., Great Britain	
IAF		H. ARWIN "Spectroscopic ellipsometry and biology: recent developments and challenges", Thin Solid Films 313-314, pp.7640774, 1998 Elsevier Science S.A.	
IAF		CHRISTOPHER PALMER "Diffraction Grating Handbook", pp. 35-44, 2000 Richardson Grating Laboratory, Rochester, New York	
IAF		ERWIN G. LOEWEN "Diffraction Gratings, Ruled and Holographic", Applied Optics and Optical Engineering, Vol. IX, pp.33-71, Bausch and Lomb, Inc., Rochester, New York 1983 Academic Press, Inc.	

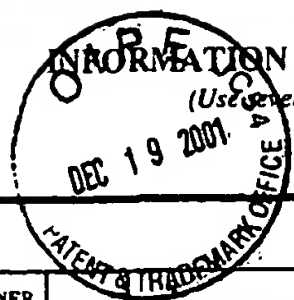
Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Docket Number (Optional)	Application Number
99/100	09/614,803 838,700
Applicant(s) Lothar Kempen, Ph.D.	
Filing Date	Group Art Unit
07/11/2000	2877

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
1AP		US 5,483,346	01/09/96	BUTZER, DANE C.	356/369		04/11/94
1AP		US 5,633,724	05/27/97	KING, DAVID A., et. al.	356/445		08/29/95
1AP		US 4,508,832	04/02/85	CARTER, TIMOTHY, et. al.	436/517		06/18/82
1AP		US 5,437,840	08/01/95	KING, DAVID A., et. al.	422/82.08		04/15/94

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO
				None				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1AP	"OPTICAL CHARACTERIZATION OF VERY THIN HYDROGENATED AMORPHOUS SILICON FILMS USING SPECTROSCOPIC ELLIPSOMETRY"; by SAITOH; HORI; SUZUKI; & IIDA; JAPANESE JOURNAL OF APPLIED PHYSICS; 1991.
1AP	"HANDBOOK OF OPTICS", by THE OPTICAL SOCIETY OF AMERICA; Vol. 1; pp. 4.23, 4.24; 1995

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)		Docket Number (Optional) 99/122	Application Number 09/64503 838,700
		Applicant(s) Lothar Kempen, Ph.D.	
		Filing Date 07/11/2000	Group Art Unit 2877

EXAMINER INITIAL	OTHER DOCUMENTS	(Including Author, Title, Date, Pertinent Pages, Etc.)
		<b>"IMAGING ELLIPSOMETRY REVISITED: DEVELOPMENTS FOR VISUALIZATION OF THIN TRANSPARENT LAYERS ON SILICON SUBSTRATES"</b> , by GANG JIN, et al., Rev. Sci. Instrum., pp. 2930-2936, 1996.
		<b>"PRINCIPLES OF OPTICS - ELECTROMAGNETIC THEORY OF PROPAGATION, INTERFERENCE AND DIFFRACTION OF LIGHT"</b> , by MAX BORN & EMIL WOLF, Sixth Edition, pp. 47-51.
		<b>"BIOSENSORS: AN INTRODUCTION"</b> , by BRIAN R. EGGINS, pp. 112-113, 1987.
		<b>"MONITORING SPECIFIC INTERACTION OF LOW MOLECULAR WEIGHT BIOMOLECULES ON OXIDIZED POROUS SILICON USING ELLIPSOMETRY"</b> , by D. VAN NOORT; S. WELIN-KLINTSTROM, et al., Biosensors & Bioelectronics Vol. 13, pp. 439-449, 1997.
		<b>"IMAGING ELLIPSOMETRY FOR BIOSENSOR APPLICATIONS"</b> , by GANG JIN, et al., TRANSDUCERS '95. EUROSENSORS IX, pp. 509-774, 1995.
		<b>"WAVEGUIDE ELLIPSOMETRY BIOSENSORS: CONCEPT AND PRELIMINARY ANALYSIS"</b> , SPIE Vol. 1648, by JINYU WANG, pp. 44-50, 1992.
		<b>"FLOW-INJECTION ELLIPSOMETRY - AN IN SITU METHOD FOR THE STUDY OF BIOMOLECULAR ADSORPTION AND INTERACTION AT SOLID SURFACES"</b> , by ULF JONSSON, et al., Colloids and Surfaces, pp. 333-339, 1985.
		<b>"BIOSENSORS BASED ON SURFACE CONCENTRATION MEASURING DEVICES - THE CONCEPT OF SURFACE CONCENTRATION"</b> , by ULF JONSSON, et al., Progress in Colloid and Polymer Sci. 70, pp. 96-100, 1985.
		<b>"[34] SURFACE IMMOBILIZATION TECHNIQUES IN COMBINATION WITH ELLIPSOMETRY"</b> , by ULF JONSSON, et al., Methods in Enzymology Vol. 137, pp. 381-1351, 1988.
		<b>"CHARACTERIZATION OF BIOMEMBRANES BY SPECTRAL ELLIPSOMETRY, SURFACE PLASMON RESONANCE AND INTERFEROMETRY WITH REGARD TO BIOSENSOR APPLICATION"</b> , by Ch. STRIEBEL, et al., Biosensors & Bioelectronics 9, pp. 139-146, 1994.
		<b>"ELLIPSOMETRIC IMMUNOSENSORS FOR THE DETERMINATION OF Y-INTERFERON AND HUMAN SERUM ALBUMIN"</b> , by T.A. RUZGAS, et al., Biosensors & Bioelectronics 7, pp. 305-308, 1992.
		<b>"DETERMINATION BY ELLIPSOMETRY OF THE AFFINITY OF MONOCLONAL ANTIBODIES"</b> , by HAKEN NYGREN, et al., Journal of Immunological Methods, 92, pp. 219-221, 1986.

EXAMINER 	DATE CONSIDERED 2/7/05
--------------	---------------------------

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

DEC 19 2001

Docket Number (Optional)

991-5

Application Number

09/614,503

838,700

Applicant(s)

Lothar Kempen, Ph.D.

Filing Date

07/11/2000

Group Art Unit

2877

\*EXAMINER  
INITIALS

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

"OPTO-ELECTRONIC IMMUNOSENSORS: A REVIEW OF OPTICAL IMMUNOASSAY AT CONTINUOUS SURFACES", by JOHN F. PLACE, et al., Biosensors 1, pp. 321-353, 1985.

"BIOSENSORS: FUNDAMENTAL, TECHNOLOGIES AND APPLICATIONS, by A. BRECHT, et al., edited by F. Sche et al., GBF Monographs Vol. 17, pp. 174-178, 1991.

"KINETICS OF ANTIBODY-BINDING TO SURFACE-IMMOBILIZED ANTIGEN: INFLUENCE OF MASS TRANSPORT ON THE ENZYME-LINKED IMMUNOSORBENT ASSAY (ELISA)", by NYGREN & STENBERG, Journal of Colloid and Interface Science, Vol. 107, pp. 560-566, 1985.

"MONITORING SPECIFIC INTERACTION OF LOW MOLECULAR WEIGHT BIOMOLECULES ON OXIDIZED POROUS SILICON USING ELLIPSOMETRY", by D. VAN NOORT; S. WELIN-KLINTSTROM, et al., Biosensors & Bioelectronics Vol. 13, pp. 439-449, 1997.

"EFFECTS OF HYDROPHILIZATION AND IMMOBILIZATION ON THE INTERFACIAL BEHAVIOR OF IMMUNOGLOBULINS", by MARTIN MALMSTEN, et al., Journal of Colloid and Interface Science 177, pp. 70-78, 1994

"TEMPORAL STUDIES ON THE DEPOSITION OF COMPLEMENT ON HUMAN COLOSTRUM IgA AND SERUM IgG IMMOBILIZED ON METHYLATED SILICON", by PENTTI TENGVALL, et al., Journal of Biomedical Materials Research, Vol. 35, pp. 81-91, 1997.

"ASSEMBLY OF ANTIBODIES IN LIPID MEMBRANES FOR BIOSENSOR DEVELOPMENT", by HUIYOU WANG et al., Applied Biochemistry and Biotechnology, pp. 163-181, 1994.

"WETTING AND DEWETTING OF Si/SiO<sub>2</sub>-WAFERS BY FREE AND LIPID-MONOLAYER COVERED AQUEOUS SOLUTIONS UNDER CONTROLLED HUMIDITY", by G. ELENDER, et al., Journal de Physique II, pp. 455-479, 1994.

"COUPLING OF BIOMOLECULES TO SILICON SURFACES FOR USE IN ELLIPSOMETRY AND OTHER RELATED TECHNIQUES", by CARL FREDRIK MANDENIUS, et al., Methods in Enzymology, Vol. 137, pp. 388-394, 1988.

"PATTERNING OF IMMOBILIZED ANTIBODY LAYERS VIA PHOTOLITHOGRAPHY AND OXYGEN PLASMA EXPOSURE", by A.W. FLOUNDERS, et al., Biosensors and Bioelectronics Vol. 12, pp. 447-456, 1997.

"A COMPARATIVE STUDY OF PROTEIN IMMOBILIZATION TECHNIQUES FOR OPTICAL IMMUNOSENSORS", by A. AHLUWALIA, et al., Biosensors and Bioelectronics 7, pp. 207-214, 1991.

"UNIVERSAL IMAGING CORPORATION - METAPOLSCOPE"; "METAMORPH IMAGING SYSTEM", by DR. RUDOLF OLDENBOURG, pp. 1-2

EXAMINER

DATE CONSIDERED

2/7/05

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



# INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

DEC 19 2001  
OFFICE OF  
PATENT & TRADEMARK

Docket Number (Optic

99/12

Application Number

09/614,503

838,700

Applicant(s)

Lothar Kempen, Ph.D.

Filing Date

07/11/2000

Group Art Unit

2877

\*EXAMINER  
INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

"A NEW VIEW ON POLARIZATION MICROSCOPY", by RUDOLF OLDENBOURG, Nature Vol. 381, pp. 811-812, 27 June 1996.

"STRUCTURAL ANALYSIS WITH QUANTITATIVE BIREFRINGENCE IMAGING", by CLIFFORD C. HOYT, et al., American Laboratory, pp. 34-42, July 1999.

"DIRECT VISUALIZATION OF MONOLAYERS AT THE AIR-WATER INTERFACE BY BREWSTER ANGLE MICROSCOPY", by DIRK HONIG, et al., J. Phys. Chem., pp. 4590 & 4592, 1991.

"MICROSCOPE AT THE BREWSTER ANGLE: DIRECT OBSERVATION OF FIRST-ORDER PHASE TRANSITIONS IN MONOLAYERS", by S. HENON, et al., Rev. Sci. Instrum. 62, pp. 936-939, 1990.

"A BIOSENSOR CONCEPT BASED ON IMAGING ELLIPSOMETRY FOR VISUALIZATION OF BIOMOLECULAR INTERACTIONS", by GANG JIN, et al., Analytical Biochemistry 232, pp. 69-72, 1995.

"COMPLEMENT ACTIVATION BY 3-MERCAPTO-1,2-PROPANEDIOL IMMOBILIZED ON GOLD SURFACES", by PENTTI TENGVALL, et al., Biomaterials 17, pp. 1001-1007, 1995.

"SPECTROSCOPIC ELLIPSOMETRY AND BIOLOGY: RECENT DEVELOPMENTS AND CHALLENGES", by H. ARWIN, Thin Solid Films 313-314, pp. 764-774, 1998.

EXAMINER

DATE CONSIDERED

2/7/05

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE CITATION</b> <i>(Use several sheets if necessary)</i>				Docket Number (Optional) <b>00/200</b>		Application Number <b>09/838,700</b>	
				Applicant(s) <b>Srivatsa Venkatasubbarao and Lothar Kempen</b>			
				Filing Date <b>April 19, 2001</b>		Group Art Unit	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>HA</i>		US 6,207,381 B1	03/27/01	LARSSON, ANITA, et al.	435/6		10/02/98
		US 6,200,814 B1	03/13/01	MALMQVIST, et al.	436/52		01/20/98
		US 6,197,595 B1	03/06/01	ANDERSON, et al.	436/180		04/19/99
		US 6,143,574	11/07/00	KARLSSON, ROBERT et al.	436/517		11/14/96
		US 6,143,513	11/07/00	LOFAS, STEFAN	435/24		06/23/99
		US 6,140,044	10/31/00	BESEMER, DONALD, et al.	435/6		09/14/95
		US 6,127,183	10/03/00	IVARSSON, BENGT, et al.	436/34		08/30/96
		US 6,045,996	04/04/00	CRONIN, et al.	435/6		05/16/96
		US 6,008,893	12/28/99	ROOS, HAKAN, et al.	356/246		03/22/99
		US 6,008,010	12/28/99	GREENBERGER, et al.	435/41		11/01/96
<i>HA</i>		US 5,972,612	10/26/99	MALMQVIST, et al.	435/6		07/12/96

FOREIGN PATENT DOCUMENTS								
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
		<i>none</i>

EXAMINER <i>HA</i>	DATE CONSIDERED <i>2/7/05</i>
-----------------------	----------------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE CITATION</b> <i>(See several sheets if necessary)</i>				Docket Number (Optional) <b>00/200</b>		Application Number <b>09/838,700</b>	
				Applicant(s) <b>Srivatsa Venkatasubbarao and Lothar Kempen</b>			
				Filing Date <b>April 19, 2001</b>		Group Art Unit	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		US 5,965,456	10/12/99	MALMQVIST, et al.	436/514		04/29/97
		US 5,955,729	09/21/99	NELSON, RANDALL, et al.	250/282		09/06/96
		US 5,922,604	07/13/99	STAPLETON, et al.	436/46		06/05/97
		US 5,922,594	07/13/99	LOFAS, STEFAN	435/291		09/26/95
		US 5,641,640	06/24/97	HANNING, ANDERS	435/7.92		06/29/93
		US RE35,716	01/20/98	STAPLETON, et al.	435/3		01/25/96
		US 4,256,834	03/17/81	ZUK, ROBERT F., et al.	435/7		04/09/79
		US 4,238,565	12/9/80	HORNBY, et al.	435/7		06/04/79

FOREIGN PATENT DOCUMENTS								
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS <small>(Including Author, Title, Date, Pertinent Pages, Etc.)</small>		
		<b>"DNA MICROARRAYS A PRACTICAL APPROACH"</b> Edited by Mark Schena, Department of Biochemistry, Beckman Center, Standord University Medical Center, Standord, USA, Oxford University Press, 1999
		<b>"MICROARRAY BIOCHIP TECHNOLOGY"</b> by Mark Schena, PhD, TeleChem International, Inc., Sunnyvale, California, USA, A BioTechniques Books Publication, Eaton Publishing, 2000

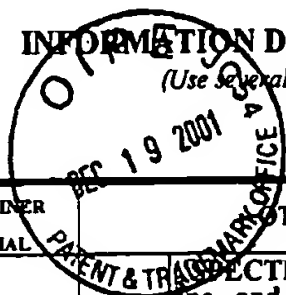
  

EXAMINER 	DATE CONSIDERED <b>2/7/05</b>
--------------	----------------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional)	Application Number 09/838,700
Applicant(s)	
Filing Date	Group Art Unit 2877

\*EXAMINER INITIAL OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

"ELECTROSCOPIC ELLIPSOMETRY AND REFLECTOMETRY A USER'S GUIDE" by Harland G. Tompkins, Motorola Inc., and William A. McGahan, Nanometrics, Inc., A Wiley-Interscience Publication, John Wiley & Sons, Inc., 1999

"HANDBOOK OF OPTICS, VOL. 1, SECTION 41.10"

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.